

Modifying an image

```
PS C:\Users\user> docker run -it ubuntu:16.04 /bin/bash
root@904bc169c13d:/# ping google.com
bash: ping: command not found
root@904bc169c13d:/# apt-get update
Get:1 http://archive.ubuntu.com/ubuntu xenial InRelease [247 kB]
Get:2 http://security.ubuntu.com/ubuntu xenial-security InRelease [109 kB]
Get:3 http://security.ubuntu.com/ubuntu xenial-security/main amd64 Packages [2049 kB]
Get:4 http://archive.ubuntu.com/ubuntu xenial-updates InRelease [109 kB]
Get:5 http://archive.ubuntu.com/ubuntu xenial-backports InRelease [107 kB]
Get:6 http://archive.ubuntu.com/ubuntu xenial/main amd64 Packages [1558 kB]
Get:7 http://archive.ubuntu.com/ubuntu xenial/restricted amd64 Packages [14.1 kB]
Get:8 http://archive.ubuntu.com/ubuntu xenial/universe amd64 Packages [9827 kB]
Get:9 http://security.ubuntu.com/ubuntu xenial-security/restricted amd64 Packages [15.9 kB]
Get:10 http://security.ubuntu.com/ubuntu xenial-security/universe amd64 Packages [985 kB]
Get:11 http://security.ubuntu.com/ubuntu xenial-security/multiverse amd64 Packages [8820 B]
Get:12 http://archive.ubuntu.com/ubuntu xenial/multiverse amd64 Packages [176 kB]
Get:13 http://archive.ubuntu.com/ubuntu xenial-updates/main amd64 Packages [2559 kB]
Get:14 http://archive.ubuntu.com/ubuntu xenial-updates/restricted amd64 Packages [16.4 kB]
Get:15 http://archive.ubuntu.com/ubuntu xenial-updates/universe amd64 Packages [1544 kB]
Get:16 http://archive.ubuntu.com/ubuntu xenial-updates/multiverse amd64 Packages [26.2 kB]
Get:17 http://archive.ubuntu.com/ubuntu xenial-backports/main amd64 Packages [10.9 kB]
Get:18 http://archive.ubuntu.com/ubuntu xenial-backports/universe amd64 Packages [12.6 kB]
Fetched 19.4 MB in 1min 1s (317 kB/s)
Reading package lists... Done
root@904bc169c13d:/# apt-get install iputils-ping
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libffi6 libgmp10 libgnutls-openssl127 libgnutls30 libhogweed4 libidn11 libnettle6 libp11-kit0 libtasn1-6
Suggested packages:
  gnutls-bin
The following NEW packages will be installed:
  iputils-ping libffi6 libgmp10 libgnutls-openssl127 libgnutls30 libhogweed4 libidn11 libnettle6 libp11-kit0 libtasn1-6
0 upgraded, 10 newly installed, 0 to remove and 3 not upgraded.
Need to get 1307 kB of archives.
After this operation, 3781 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu xenial/main amd64 libffi6 amd64 3.2.1-9-1ubuntu1 [42.1 kB]
Get:2 http://archive.ubuntu.com/ubuntu xenial/main amd64 libgmp10 amd64 6.1.2-2ubuntu1 [454 kB]
Get:3 http://archive.ubuntu.com/ubuntu xenial/main amd64 libidn11 amd64 1.33-2ubuntu1 [122 kB]
Get:4 http://archive.ubuntu.com/ubuntu xenial/main amd64 libnettle6 amd64 3.7.3-1ubuntu1 [114 kB]
Get:5 http://archive.ubuntu.com/ubuntu xenial/main amd64 libp11-kit0 amd64 0.23.7-3ubuntu1 [265 kB]
Get:6 http://archive.ubuntu.com/ubuntu xenial/main amd64 libtasn1-6 amd64 4.13-3ubuntu1 [103 kB]
Get:7 http://archive.ubuntu.com/ubuntu xenial/main amd64 libgnutls30 amd64 3.4.14-3ubuntu1 [555 kB]
Get:8 http://archive.ubuntu.com/ubuntu xenial/main amd64 libgnutls-openssl127 amd64 3.4.14-3ubuntu1 [10.5 kB]
Get:9 http://archive.ubuntu.com/ubuntu xenial/main amd64 libhogweed4 amd64 3.4-1 [149 kB]
Get:10 http://archive.ubuntu.com/ubuntu xenial/main amd64 iputils-ping amd64 3:20141127-1 [22.5 kB]
Fetched 1940 kB in 1min 1s (317 kB/s)
debconf: delaying package configuration, since apt-utils is not installed
Selecting previously unselected package iputils-ping.
(Reading database ... 5296 files and directories currently installed.)
Preparing to unpack .../iputils-ping_3%3A20141127-1_amd64.deb ...
Unpacking iputils-ping (3:20141127-1) ...
Selecting previously unselected package libffi6.
Unpacking libffi6 (3.2.1-9-1ubuntu1) ...
Selecting previously unselected package libgmp10.
Unpacking libgmp10 (6.1.2-2ubuntu1) ...
Selecting previously unselected package libidn11.
Unpacking libidn11 (1.33-2ubuntu1) ...
Selecting previously unselected package libnettle6.
Unpacking libnettle6 (3.7.3-1ubuntu1) ...
Selecting previously unselected package libp11-kit0.
Unpacking libp11-kit0 (0.23.7-3ubuntu1) ...
Selecting previously unselected package libtasn1-6.
Unpacking libtasn1-6 (4.13-3ubuntu1) ...
Selecting previously unselected package libgnutls30.
Unpacking libgnutls30 (3.4.14-3ubuntu1) ...
Selecting previously unselected package libgnutls-openssl127.
Unpacking libgnutls-openssl127 (3.4.14-3ubuntu1) ...
Selecting previously unselected package libhogweed4.
Unpacking libhogweed4 (3.4-1) ...
Setting up iputils-ping (3:20141127-1) ...
Setting up libffi6 (3.2.1-9-1ubuntu1) ...
Setting up libgmp10 (6.1.2-2ubuntu1) ...
Setting up libidn11 (1.33-2ubuntu1) ...
Setting up libnettle6 (3.7.3-1ubuntu1) ...
Setting up libp11-kit0 (0.23.7-3ubuntu1) ...
Setting up libtasn1-6 (4.13-3ubuntu1) ...
Setting up libgnutls30 (3.4.14-3ubuntu1) ...
Setting up libgnutls-openssl127 (3.4.14-3ubuntu1) ...
Setting up libhogweed4 (3.4-1) ...
root@904bc169c13d:/# ping google.com
PING google.com (142.250.199.78) 56(84) bytes of data:
64 bytes from 142.250.199.78: icmp_seq=1 ttl=37 time=40.1 ms
64 bytes from 142.250.199.78: icmp_seq=2 ttl=37 time=40.2 ms
64 bytes from 142.250.199.78: icmp_seq=3 ttl=37 time=40.2 ms
64 bytes from 142.250.199.78: icmp_seq=4 ttl=37 time=40.4 ms
64 bytes from 142.250.199.78: icmp_seq=5 ttl=37 time=40.3 ms
64 bytes from 142.250.199.78: icmp_seq=6 ttl=37 time=40.5 ms
64 bytes from 142.250.199.78: icmp_seq=7 ttl=37 time=40.2 ms
64 bytes from 142.250.199.78: icmp_seq=8 ttl=37 time=40.3 ms
^C
--- google.com ping statistics ---
68 packets transmitted, 68 received, 0% packet loss, time 67103ms
rtt min/avg/max/mdev = 39.580/40.417/41.592/0.318 ms
root@904bc169c13d:/# exit
exit
PS C:\Users\user>
```

Committing changes

```
PS C:\Users\user> docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
904bc169c13d   ubuntu:16.04   "/bin/bash"             9 minutes ago   Exited (0)    3 minutes ago   wizardly_sanderson
PS C:\Users\user> docker commit --help
```

Usage: docker commit [OPTIONS] CONTAINER [REPOSITORY[:TAG]]

Create a new image from a container's changes

Options:

- a, --author string Author (e.g., "John Hannibal Smith <hannibal@a-team.com>")
- c, --change list Apply Dockerfile instruction to the created image
- m, --message string Commit message
- p, --pause Pause container during commit (default true)

```
PS C:\Users\user> docker commit -a 'David Lanoy' -m 'Added ping utility.' 904 davidlanoy/ping
sha256:fb3aa9a1de53b0907f4376c008e3cea86bb867023da7def9bdceb3bbf3f93003
```

```
PS C:\Users\user> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
davidlanoy/ping latest    fb3aa9a1de53   9 seconds ago  169MB
ubuntu        16.04    aefd7f02ae24   2 weeks ago   134MB
```

```
PS C:\Users\user> docker run -it --rm davidlanoy/ping /bin/bash
root@ef16e116b241:/# ping google.com
PING google.com (142.250.199.78) 56(84) bytes of data.
64 bytes from 142.250.199.78: icmp_seq=1 ttl=37 time=40.3 ms
64 bytes from 142.250.199.78: icmp_seq=2 ttl=37 time=40.3 ms
64 bytes from 142.250.199.78: icmp_seq=3 ttl=37 time=40.4 ms
^C
--- google.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2002ms
rtt min/avg/max/mdev = 40.350/40.385/40.439/0.168 ms
root@ef16e116b241:/# exit
exit
PS C:\Users\user>
```